

Amendment Under 37 C.F.R. § 1.114(c)
U.S. Application No. 10/511,294

Q98835

AMENDMENTS TO THE DRAWINGS

Figs. 3, 4 and 5

Attachment: Replacement Sheets

REMARKS

Claims 8-15 are all the claims pending in the application. Claims 8-12 and 15 are rejected. Claims 8, 10, 12 and 15 are amended in order to clarify the subject matter of the invention. Claims 13 and 14 are withdrawn from consideration. New claims 16 and 17 and 18 are added. Claim 16 is a combination of claims 10 and 15. Claim 17 is based on claim 8 and the features disclosed in the paragraph beginning at page 6, line 20 of the original specification. Claim 18 is an alternative statement of the invention with regard to the unthreaded spreader portion acting, in cooperation with a slight play between the spreader and an internal stop, to force the inner tube further into the outer tube. No new matter is added and the new claims are directed to the same invention as originally disclosed and claimed.

Election of Species

The Examiner has maintained his holding that claims 13 and 14 are withdrawn from examination as being directed to a non-elected species.

Applicants have maintained the pendency of claims 13 and 14 should their parent claims be allowed.

Drawings

The Examiner continues to object to the drawings as failing to comply with 37 C.F.R. § 1.84(p)(4). In support of this objection, the Examiner notes that the reference characters 41 and 42 in Figs 1-3 are each used to refer to a given structural element, while the reference characters 141 and 141 are used in Figs. 4 and 5 to refer to the same structural element. The Examiner interprets Rule 84(p)(4) as prohibiting the use of different reference numerals for the same part, apparently without regard to whether that part refers to the same or different embodiments.

Applicants have amended in the drawings all rejected reference numerals as follows, even though Applicants believe that different embodiments should be allowed to have different numerals, even for the same element:

Reference characters 42, 141 and 142 are amended to read “41” throughout all Figs.

Reference character 112 is amended to read “12” throughout all Figs.

Reference character 111 is amended to read “11” throughout all Figs.

Reference character 132 is amended to read “32” throughout all Figs.

Reference character 121 is amended to read “21” throughout all Figs.

Reference character 122 is amended to read “22” throughout all Figs.

Reference character 117 is amended to read “17” throughout all Figs.

Reference character 127 is amended to read “27” throughout all Figs.

Reference character 123 is amended to read “23” throughout all Figs.

Reference character 137 is amended to read “37” throughout all Figs.

Reference character 136 is amended to read “36” throughout all Figs.

Corresponding changes have been made to the specification.

Specification

The Examiner has objected to the specification because the Examiner believes that there is no proper antecedent basis for the claimed subject matter; in particular, the Examiner requires correction of “a first limit stop” recited in claim 8, line 5 and “a second limit stop” recited in claim 8, line 16.

The objection concerning the lack of antecedent basis for “first” and “second” limit stop in the specification has been overcome by amending the claims to delete the objectionable words.

Claim Rejections – 35 USC § 102

Claims 8-12 are rejected as being anticipated under 35 U.S.C. § 102(b) by the German utility model DE 8,004,343 U1 (DSI-Sportartikel or “DSI”). This rejection is traversed for at least the following reasons.

Addition of “Non-Threaded Bore”

As a preliminary matter, Applicants wish to note the amendment to independent claim 8, which adds further limitations that clearly distinguish over DSI. In particular, the “spreading

element” has been defined to have a “non-threaded bore.” This feature results in a different structure and operation from that of the cited DSI reference. The same limitation appears in claims 10 and 15, which now are placed into independent form, and new independent claims 16 and 17. Further, those claims have added limitations that are not found in the prior art, as explained subsequently.

The first added feature in all of the claims is that the spreading element has a “non-threaded bore.” The feature is disclosed in paragraphs [0023] (“through bore”), [0028] (“placed over”; “placing” would not be possible if the bore were threaded) and in Figure 1 (the hatching of the interior element (17) being extended radially inwards further than in the spreading element (16), indicating that the interior element (17) has a threaded bore, while the spreading element does not have a thread).

Addition of “Without Rotation Thereof”

Applicants also wish to note the amendment to independent claim 8, which adds further limitations that clearly distinguish over DSI. In particular, the “spreading element” has been defined to “move axially within narrow limits without rotation thereof.” This feature also results in a different structure and operation from that of the cited DSI reference. The same limitation appears in claims 10 and 15, which now are placed into independent form, and new independent claims 16 and 17.

The second added feature in all of the claims is that the spreading element can “move axially within narrow limits without rotation thereof.” The added feature is disclosed in paragraph [0023] (between guide piece 33 133 and spreading element 16, 116, enough play is available so that the latter can move unhindered both axially and radially. Therefore spreading element 16, 116 is axially moveable within narrow limits between outer limits stop 26, 126 on the free end of the adjusting screw 18, 118 and an inner limit stop surface 28, 128.” Also, in paragraph [0030], the response to a further axial movement of interior element 17, 117, the spreading element 16, 116 is spread apart radially to contact the interior surface of outer tube 12, 112. This effect is due to a specific pre-established slight distance “a” from inner limit stop

surface 28, 128 of collar 32, 132. This is possible without rotation of the spreader because the spreader does not have a threaded bore. The position of distance “a” is illustrated in Fig. 1.

DSI-Sportartikel

The Examiner substantially repeats the bases for rejection from the Office Action dated October 5, 2006 and the comparison of the features of DSI to the rejected claims. Additional brief comment is provided in support of the rejection of claims 10 and 11. However, the Examiner also provides a detailed response to the Applicant’s arguments at pages 8-10 of the Office Action. There, the Examiner notes the Applicant’s argument that interior element (9) is rotationally fixed to screw (5) by counter nut (8) and is not axially moveable along the screw. The Examiner further observes that the nut might act as a stop, but relative to the screw, the interior element is still axially moveable since turning the screw will axially move the interior element 9, which is threaded, upwards relative to Figure 1. The Examiner further observes that there is nothing that prevents the interior element from not moving axially relative to the screw, and that features 8 and 9 move towards top 11 such that 11 and 9 sandwich element 10. The Examiner also notes that the machine translation of the DSI reference indicates that the cone 9 is “gone up” or “screwed.”

Further, with respect to the argument that DSI’s spreading element “has no play,” the Examiner argues that the way one device operates relative to the other is not considered, as it is not structural. The Examiner also notes that the claimed invention does not mention “play” and asks what structure corresponds to the “play feature.”

DSI’s Spreader Has A Threaded Bore

As admitted by the Examiner with respect to Figs. 1 and 2 of DSI, the interior element 9 has an internal threaded bore A12 cooperating with the adjusting screw 5. The Examiner also admits that spreading element 10 has a bore A9 defining an inner cone A10. The Examiner asserts that the spreading element 10 and the interior element 9 cooperate and form a spreading

device axially supported at the end of the inner tube 3. The Examiner makes no comment with respect to the threading of the bore A9 in spreading element 10 or its operation to effect a clamping of the two pole segments. However, as is clear from the Examiner's machine translation (reference to "screwed up") and the appended expert translation of the DSI, text at lines 9-10, the bore A9 is threaded. The Examiner is invited to note that the German term "Spreizhülse 10 mit Innengewinde" (line 24 of DSI) means "spreading sleeve 10 with an inner screw thread".

DSI's Spreader is NOT Moveable "Without Rotation Thereof"

Because DSI's spreader 10 is internally threaded and engages the screw 5, it cannot move axially without rotation thereof. By contrast, the spreading element according to the present invention is not threaded, and is axially slidable freely over the shaft of rod 18, even though the shaft is threaded. Further, the spreader is moveable within narrow limits, with reference to the separation distance "a" as disclosed at paragraph [0030] and illustrated in Fig. 1. Thus, an axial force of a user pushing down on the pole causes the "spreading element" to "move axially within narrow limits without rotation thereof" and apply a further force to the inside walls of the outer pole.

Threaded Bore in DSI Spreader Has Different Operation for Locking/Unlocking

In DSI, each of the spreading element (10) and the interior element (9) must have a screw thread for the device to be operational. This is because the interior element (9) is rotationally fixed to the screw (5) by a counter nut (8) and is therefore not axially moveable along the screw during operation. Thus, when axially rotating the inner tube (3) while keeping the outer tube (1) rotationally fixed, the interior element (9) rotates together with the screw (5) and the inner tube (3) relative to the spreading element (10). Furthermore, the spreading element (10) is not axially moveable without rotation thereof along the screw within narrow limits, as its bore has a screw thread.

This is in direct contrast to the spreading element of the present invention. According to the present invention, the first element (interior element 17 in Figure 1) does not rotate together with the threaded rod/screw (18 in Figure 1). Even though there is an inner torque, it is due to

the screw (18 in Figure 1). This torque is smaller than the torque resulting from the friction between two conical surfaces in DSI. Such friction between the conical surfaces is a disadvantage of the DSI device that is avoided by the present invention.

Threaded Bore in DSI Spreader Prevents Operation in Response to Axial Force

The Examiner argued that if an element is screwed onto another element it is axially moveable. However, on the basis of the present amendment, it is not moveable without rotation. Thus, if an axial force is applied by a user, there is no added spreading force, since the threads of the spreader and the shaft prevent movement. Thus, the spreading element (10) of DSI is not axially moveable along the screw within narrow limits without rotation thereof, as its bore has a screw thread, in contrast to the spreading element of the present invention. In this regard, the relative position of spreading element (10 of Figure 1 of DSI-Sportartikel) and cone-element (9 of Figure 1 of DSI-Sportartikel) is pre-determined and fixed by the rotational position of the screw (5 of Figure 1 of DSI-Sportartikel). Therefore, the spreading element has no "play," as would be understood by one skilled in the art.

Again, these features are crucial to the present invention, as the "play" which the spreading element has in Applicant's novel structure, provides the pole with an additional clamping effect in combination with its adjustability. This effect is an important added feature of the present invention that is not present in the DSI device. Specifically, the spreading element, after adjustment of the pole-length, is adjacent to the second (outer) limit stop. When axial pressure is exercised from above on the pole after length-adjustment, the spreading element is pressed against the inner 'wall' of the outer tube even more. Due to the intentional 'play', by exercising axial pressure on the pole from above, the spreading element is forced into the 'play' and can thereby spread even further against the inner wall of the outer tube by traveling further onto the cone of the interior element. The additional spreading therefore advantageously happens upon exercise of axial force on the pole from above. Therefore, more weight can be transferred over the pole for a given torsional fixing force when fixing the telescopic pole than over any other state of the art poles without resulting in a length change. The adjusted length is retained up to higher degree of force when axial force from above is exercised on the pole.

The DSI device only works due to the interior screw thread of the spreading element and the rotational fixation of the cone element on the screw. For the DSI device to be workable, the relative axial position of both elements has to be fixed and predetermined by the screw. This prevents the system from having 'play'.

Moreover, it is not suggested anywhere to introduce a feature that provides a non-threaded spreader and allows such 'play', nor would that be obvious to a person skilled in the art. Indeed, DSI would not work if the spreader were not threaded. Further, there is no hint in the DSI document pointing towards the development of an additional clamping effect that takes place when exercising axial force on the pole from above.

For all of the foregoing reasons, independent claim 8 and dependent claims 9-12 are not anticipated by the prior art DSI Sportartikel reference.

Claims 8 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kupski (3,145,669). This rejection is traversed for at least the following reasons.

Again, claims 8 and 15 have been amended to state that the spreader can “move axially within narrow limits without rotation thereof.” The claims have been further amended to state that there is a “single and inner cone.” This limitation also appears in new claims 16 and 17.

Kupski

Kupski discloses, in Figures 5 to 7 (reference numerals of Kupski), an adjustable-length pole comprising an outer tube (41), an inner tube (40), a disc (43a), a screw (44), a cotter pin (44a), a threaded bolt (44), an expansion ring (16a), which is close-fitting, but rotatable within the outer tube (41), said expansion ring (16a) having a bore with two conical surfaces (27a, 28a) opposite of each other, as well as a drive cone (17a), and a plain cone (18a).

According to Kupski (lines 26 to 30 of column 3 in the patent), the drive cone (17a) is held against relative rotation with respect to the expansion ring (16a) by bosses (35', 36', 37'). By the disc (43a), the plain cone (18a) is therefore fixed rotationally and axially with respect to the screw (44), which results in the fact that the plain cone (18a) always rotates together with the screw (44) with respect to the inner tube (40). The plain cone (18a) is seated in camming

relation in a conical surface (27a) in the expansion ring (16a), limiting the axial movement of the expansion ring (16a). The compression spring (47) serves the function of ensuring that the expansion ring (16a), respectively the drive cone (17a) is rotationally fixed with respect to the outer tube in an adjusted position of the pole (similar to the 'frictional' contact between the spreading sleeve and the outer tube in D S I).

However, as in DSI, Kupski fails to disclose at least the spreading element disposed between the first (inner) limit stop and the second (exterior) limit stop such that it can move axially within narrow limits without rotation thereof.

As mentioned above, these features are crucial to the present invention, as the 'play' which the spreading element has, provides the pole with an additional clamping effect in combination with its adjustability. This effect is desired by the inventor and is not present in the Kupski device. Nor is such feature obvious.

Even if one skilled in the art would try to configure the expansion ring in a way that it could 'travel' between the two cones (17a, 18a), the double-conical-surface arrangement of Kupski would prevent the additional clamping effect achieved by the present invention for the following reason. While traveling toward the plain cone (18a), for example, the expansion cone would expand in direction of the plain cone (18a). However, at the same time, it would become 'thinner' in circumference in the region of interaction with/toward the drive cone (17a), which is situated opposite to the plain cone (18a), with the expansion cone located between the two, while 'losing contact' with said drive cone (17a). The net expansion in such a case would be zero. This is in dramatic contrast to the additional expansion achieved in the present invention, resulting in an important additional clamping effect.

Therefore, Kupski doesn't disclose any axial 'play' for the expansion ring, as it is 'sandwiched' between two oppositely directed conical surfaces. There is no hint in Kupski that the introduction of axial 'play' for the expansion ring might be of any advantage for the overall clamping effect of the pole length adjusting system, which thus would not be obvious to a person skilled in the art. Furthermore, even if one would introduce 'play' into the system, this would not lead to an improvement of the invention, as the two cones (17a, 18a) have to axially approximate

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during adjustment of the pole length for the clamping effect to take place, making the introduction of 'play' superfluous in the invention by Kupski.

New Claims

Applicant has added new claims 16-18 in order to present alternative statements of the features of the present invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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